The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) An electric motor control system comprising:

a stator for producing a magnetic field;

a surface mount permanent magnet rotor rotated by said magnetic field;

a motor shaft coupled to said rotor;

power electronics for controlling said magnetic field in said stator; ~~and~~

wherein said power electronics controls the q-axis and d-axis current components for the electric motor; and

a controller controlling said power electronics, said controller including a control block to control the d-axis current as a function of the angle β.

2. (original) The electric motor control system of Claim 1 wherein said stator includes current carrying coils to generate said magnetic field.

3. (original) The electric motor control system of Claim 1 wherein said surface mount permanent magnet rotor includes rare earth magnets.

4. (original) The electric motor control system of Claim 1 wherein said power electronics comprises a voltage source inverter.

5. (cancelled)

6. (currently amended) A method of controlling an electric motor comprising:

providing an electric motor having a wound stator, a rotor magnetically coupled to said wound stator, said rotor including surface mount permanent magnets;

controlling q-axis current in the stator; ~~and~~

controlling d-axis current in the stator; and

wherein the step of controlling the q-axis current in the stator comprises controlling the q-axis current as a function of the angle β.

7. (cancelled)

8. (original) The method of Claim 6 wherein the step of controlling the d-axis current in the stator comprises controlling the d-axis current as a function of the angle β.

9. (original) The method of Claim 6 further comprising the step of controlling the position of the electric motor.

10. (currently amended) A method of controlling an electric motor comprising:

providing an electric motor having a wound stator, a rotor magnetically coupled to said wound stator, said rotor including surface mount permanent magnets;

providing a vector controller and voltage switched inverted to provide stator current to the wound stator; ~~and~~

controlling the q-axis and d-axis current components of the stator current to control the torque of the electric motor; and

calculating the d-axis current setpoint as a function of the angle of the stator current vector with reference to the q-axis.

11. (original) The method of Claim 10 further comprising the step of determining the position of said rotor.

12. (original) The method of Claim 11 further comprising the step of determining the actual current of the electric motor.

13. (cancelled)

Amendments to the Drawings:

The attached sheet of drawings includes changes to Figure 3. This sheet, which includes Figure 3, replaces the original sheet including Figure 3.

Attachment: Replacement sheet